

## **REMARKS**

Claims 1-31 are now pending in the application. Pending claims 1-31 stand rejected under 35 U.S.C. § 103 (a). Applicants acknowledge the Examiner for the telephonic interview conducted on January 27, 2005. The amended claims and the following remarks are considered by Applicants to overcome each rejection raised by the Examiner and to place the application in condition for allowance. A request for continued examination is submitted herewith. An early Notice of Allowance is therefore requested.

### **I. Interview**

Applicants acknowledge the Examiner for the interview conducted on January 27, 2006. In the Interview, Applicants submitted a proposed amendment to claim 1. The Examiner admitted that the claim amendments would overcome the cited references. In particular, the Examiner admitted that amended claim 1 would overcome the combination of Stengel and Aoyama, since the combination of Stengel and Aoyama fail to teach or suggest a device comprising an isotopically enriched piezoelectric material that is a single crystal quartz.

### **II. Rejection of Pending Claims 1-31 Under 35 U.S.C. § 103 (a)**

Claims 1-4 stand rejected as being unpatentable over Stengel et al. in view of Aoyama. Claims 5-8 stand rejected as being unpatentable over Stengel in view of Aoyama and further in view of Burden (2004/0171226) published on September 2, 2004 ("Burden"). Claims 9-18 were rejected over Stengel in view of Aoyama and further in view of Kelsey et al. The Examiner also rejected claims 19-31 citing Stengel in view of Aoyama and further in view of Mulligan et al. This rejection is traversed and believed overcome in view of the following discussion.

#### **A. Summary of Cited References**

Stengel is directed to a structure and method for fabricating semiconductor structures utilizing the formation of a substrate including an isotopically enriched material. More specifically, Stengel discloses an amorphous intermediate layer 58 that is grown on a

substrate 52 at the interface between substrate 52 and a growing accommodating buffer layer 54 which is a monocrystalline crystal oxide layer.

Aoyama discloses a multi-component piezoelectric ceramic material. Aoyama further discloses that the multi-component based ceramic is used to improve the electromechanical properties. More specifically, Aoyama discloses a PZT crystal having a PZT piezoelectric substance with a large piezoelectric constant.

Burden discloses a semiconductor wafer structure having a device layer, an isotopically enriched insulating layer, and a substrate. Burden also discloses that the silicon is composed of three stable isotopes which contribute to the photon scattering which decreases the thermal conductivity of naturally occurring silicon. Burden discloses the use of the Si28 isotope.

Kelsey is directed to isotopically enriched optical materials. The optical materials provide high isotopic purity silica, calcium, zinc, gallium and germanium materials with increased resistance to optical damage. More specifically, Kelsey discloses the use of Si29 and Si30 isotopes.

Mulligan discloses a multi-function composite structure. Mulligan is directed to multi-function structures capable of more than one discrete function and to fibrous monolith processing techniques for fabricating different types of devices.

## **B. Argument**

### **Rejection of pending claims 1-31 under 35 U.S.C. 103(a)**

In view of amended claim 1, it is respectfully submitted that the cited references fail to teach or suggest all the features recited in claim 1. More specifically, it is respectfully submitted that the cited references either alone or in combination teach or suggest a device comprising an isotopically enriched piezoelectric material that is a single crystal quartz.

Amended claim 1 recites subject matter that is neither taught nor suggested by the applied references. In particular, the cited references do not teach or suggest an isotopically enriched piezoelectric material that is a single crystal quartz. Claims 2-31 depend upon claim 1, therefore it is submitted that these claims likewise recite patentable subject matter.

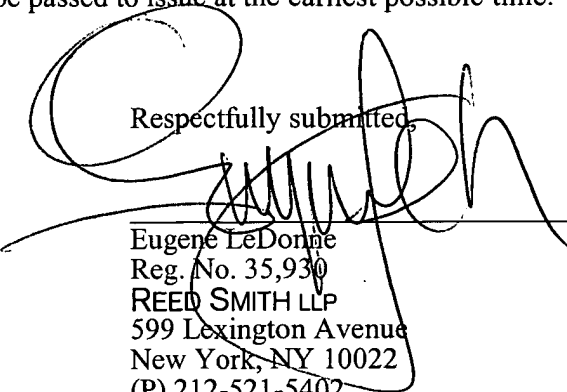
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Accordingly, Applicants requests the withdrawal of the rejection of claims 1-31 under 35 U.S.C. 103(a).

### **III. Conclusion**

For the reasons presented above, claims 1-31 are believed by Applicant to define patentable subject matter and should be passed to issue at the earliest possible time. A Notice of Allowance is requested.

Respectfully submitted,



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